

IPG Challenge Introduction

How many expressions do you know that include the word "clean"? A clean slate, a clean sweep, a clean bill of health. Squeaky clean, clean as a whistle. You can be clean cut or make a clean break or clean your plate or be clean out of something.

But what does it mean to be clean? Is cleanliness something you can measure? In some industrial processes cleanliness is crucial to success. For example, the first and most critical step of applying coatings to optical components is a thorough cleaning. Even a tiny speck of oil or grease will prevent the coating from adhering to the surface.

Integrated circuits are manufactured in ultra-clean facilities called semiconductor fabrication plants, or fabs. Cleanrooms are necessary because even the smallest bit of hair, skin, or cosmetic particles can contaminate the process.

Welding, brazing, soldering, coating and many other industrial processes require surfaces be cleaned first. But what cleaning method should be used and how do you know when it's clean enough?